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## Facsimile Transmission

Date: July 26, 2000

Time: 11:55 am

Fax: see below

Pages (including cover): 3

To: Louise Fabin- ATSDR

(312) 886-6066

Brad Stimple- U.S. EPA

(312) 353-9176

David DeVries- SET Environmental (847) 537-9265

Company:

Department:

From: Michael Fiore

Attached please find a formal copy of the sampling protocol we discussed and developed yesterday while on-site. Please do not hesitate to contact me directly with any questions or concerns. If I do not hear from you, I will assume that the attached protocol adequately documents our agreed upon sampling approach, and will implement it immediately.

Sincerely,

Michael Fiore, CIH, CSP

Industrial Hygiene & Safety Services Manager

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## Sampling Protocol for Mercury Contamination within a Residential Home

Per discussions with Mr. Brad Stimple, On-scene Coordinator for the U.S. Environmental Protection Agency (EPA), Ms. Louise Fabinski, Sr. Regional Representative for the Agency for Toxic Substances and Disease Registry (ATSDR), Ms. Cheryln Tribble, Sr. Environmental Engineer for Nicor Gas, and Michael Fiore CIH, CSP from Hygieneering, Inc., the following sampling protocol has been developed and agreed upon by all the abovementioned as the desired strategy for collecting residential home mercury air samples. This protocol was designed to be implemented once the on-site remediation service feels that the environment has been adequately cleaned, and for the sole purpose of gathering valid data to be further assessed by Nicor and applicable governmental authorities.

### Preparation

1. Prior to testing, the following preparation activities will be performed:
  - a. Environment shall be heated to a minimum temperature of ~~85-90~~ deg. F and vented for at least 12 hours. ~~80-85~~ OK
  - b. Following the venting period, the home shall be closed up (windows, doors shut) for a minimum of 60 minutes.

### Screen Test

2. Upon initial entry, screen testing of the area shall be performed utilizing a Jerome mercury analyzer. If all readings are "non-detect" (below the sensitivity of the instrument which is  $0.003\text{mg}/\text{m}^3$ ), proceed to next step. If any measurable concentrations are noted, sampling should not be performed and additional cleaning recommended.

### Quantitative Sampling

3. Prior to sampling period, the indoor temperature of home environment should be determined and documented. Temperature should be at least 80 degrees F. prior to commencing sampling.
4. Sampling shall be performed utilizing a pump and tube method. The pump should be calibrated to 0.5 liters/minute. The media utilized will be SKC media (anasorb C300- comparable to hopcalite).
5. One (1) field blank (opened in field and handled with samples) shall be taken for each home sampled. In addition, two (2) unopened blanks from the same lot shall be retained and submitted with the corresponding field blank.
6. A minimum of five (5) samples should be taken throughout the home. All children bedrooms and play areas shall be tested.
7. A floor map of the home shall be drawn to document the locations selected for sampling. The floor map shall include occupancy information identifying the rooms sampled (ie. children's bedroom, playroom, etc.)
8. The sample media shall be set at a height of between 3-4 feet from ground level to represent a breathing zone sample.

9. The sample time should be approximately eight (8) hours. Periodic pump flow checks shall be performed and documented throughout the sampling period (minimum of 2)
10. Upon completion of the sampling, samples shall be handled and submitted to an AIHA accredited laboratory for analysis utilizing proper chain of custody procedures. Sample turnaround time will be determined, in advance, by Nicor and either be 24 hour or same day.
11. The analytical sampling method to be utilized should be NIOSH 6009 or OSHA ID140.
12. Upon receipt of results, Hygieneering will prepare a final report and submit to Nicor for further review and follow-up action. The report shall consist of, at a minimum:
  - a. Floor Map documenting the locations of samples taken and corresponding results, including a description of the occupancy of the rooms being tested.
  - b. Sample data sheets documenting the media number, sample location, pump flow (with checks), final volume sampled, sample duration and any remarkable field notes.
  - c. Sample results as submitted by laboratory corresponding to provided sample data sheets.
  - d. Copy of this sampling protocol.

If there are any noted concerns or discrepancies with the above protocol from our prior discussions, please contact Michael Fiore to address at (630) 654-2550 immediately. Otherwise, the above sampling protocol will be assumed to be agreeable to all abovementioned parties.

CC: David DeVries- SET Environmental  
Louise Fabinski- ATSDR  
John Feller CIH, CSP- Hygieneering  
Margaret Pelletier CIH- Hygieneering  
Brad Stimple- U.S. EPA  
Cheryl Tribble- NICOR

**DRAFT**

8/17/00

**Protocol for Screening Residential Homes for Mercury Contamination**  
**Including Relocation of Residents, if Appropriate**

A conference call was held on Thursday, August 17, 2000 to discuss options for and appropriateness of relocating residents based on location of the contamination. Participating in the call were:

Dick Tappan & Cheryl Tribble, Environmental Services, Nicor Gas  
Lee Haines, Corporate Communications, Nicor Gas  
Ken Runkle, Illinois Department of Public Health (IDPH)  
Louise Fabinski & Clayton Core, Agency for Toxic Substances and Disease Registry (ATSDR) – Chicago  
Rich Nichol & John Rischer, ATSDR – Atlanta  
Ted Hogan, Theodore J. Hogan & Associates, (technical consultant to Nicor Gas)  
Dave DeVries & Mark Parquette – SET Environmental

The following was accepted as an agreed upon protocol:

- Screening with a Jerome Mercury Vapor Analyzer should be done at the former mercury regulator location inside the house, along the route a regulator may have been carried when removing it from the house and at the new meter/regulator location outside.
- If mercury contamination is found, thoroughly screen the entire house, giving special attention to living areas, closets, and mattresses in bedrooms. Vehicles should also be screened.
- If mercury contamination is found throughout the house or at high levels, the residents should be relocated to hotels or other temporary living locations.
- If the contamination is confined to a small area that is cordoned off, it is allowable for residents to remain in the areas of the house that have zero readings on the Jerome Mercury Vapor Analyzer. However, residents may prefer to leave the house until after the cleanup is done. Clothes and other personal belongings may be removed from the house by residents if these items have been screened with the Jerome Mercury Vapor Analyzer and have a zero reading. The Nicor Gas Community Relations Director(CRD) should explain the options available for residents.
- Care should be taken to prevent spread of contamination, particularly through HVAC vents.
- Residents should not be in the house during preparation for or performance of the confirmatory hopcalite test since the temperature needs to be raised to 85-90 deg. F for eight hours with the windows and doors closed.
- All residents in mercury impacted homes should have a urine test conducted by a medical facility that is knowledgeable on mercury health issues.